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A pilot study to examine school-based aspects of the BMI surveillance programme in NE England

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Abstract

This report describes research on the National Child Measurement Programme (NCMP), a national surveillance programme for measuring children's body mass index (BMI), as part of broader UK public health initiatives to halt the current rise in childhood obesity. The programme was implemented in response to the 2004 Public Service Agreement (PSA) target to halt the year on year rise in obesity amongst children under 11 in England by 2010. All Primary Care Trusts (PCT) in England are now required to measure the height and weight of reception children (aged 4-5) and year 6 children (aged 10-11) in order to inform local planning and targeting of resources and interventions and to enable tracking of local progress against the PSA target (Department of Health 2006).

The research, based in North East England, was carried out in two phases. The first phase involved audit of all independent and special needs schools within the North East Strategic Health Authority. Telephone interviews with these schools in February/March 2007 established rates of compliance with and experiences of the programme. Phase two involved a qualitative study in two schools from one PCT. Interviews, discussion groups and observation were used to explore the experiences of teachers, parents and children involved in the programme.

Findings from the audit show minimal participation by special or independent schools. Special schools present a number of reasons for being wary of inclusion in the measurement scheme, from small cohort sizes leading to fears that children will be singled out or labelled, to concerns about children's mental stability. The case for non inclusion of independent schools seems to rest on the fact that PCTs do not usually have existing relationships with them. Independent schools would agree to be included if resources were provided to carry out the exercise but are unlikely to do so unless participation is made compulsory. Qualitative findings from the project highlight issues such as multiple misunderstandings of the programme by different individuals, the difficulties children had with interpreting metric measures of height and weight, children sharing measurements with each other and understandings of body size. The school is also examined as a setting for BMI measurement. with a discussion of the ways in which responsibility for children's health is placed with different individuals, the role of children's competence and right to consent to measurement and the role of schools as sites for health promotion, screening and surveillance.

The report concludes with a number of recommendations for future rounds of the programme, such as the inclusion of independent schools in the programme, the continued exemption of special needs schools, the provision of clearer information for teachers, parents and children concerning the purpose of the measurement programme, and the need to incorporate the programme into wider health initiatives in school in order to facilitate children's participation and prevent distress regarding measurement of body size and weight.

Glossary

BMI	Body Mass Index
DCSF	Department for Children, Schools and Families
DH	Department of Health
ESRC	Economic and Social Research Council
ISIS	Independent Schools Information Service
NCMD	National Child Measurement Database
NCMP	National Child Measurement Programme
NEPHO	North East Public Health Observatory
PCT	Primary Care Trust
PSA	Public Service Agreement
SHA	Strategic Health Authority

Context

This project was triggered by the roll out of the 2005/06 National Child Measurement Programme (NCMP), a national surveillance programme for measuring children's body mass index (BMI), one of the largest datasets of its kind in the world, and part of a larger UK public health programme to halt the current rise in childhood obesity. The programme was implemented in response to the 2004 Public Service Agreement (PSA) target to halt by 2010 the year on year rise in obesity amongst children under 11 in England. All Primary Care Trusts (PCTs) in England are now required to measure the height and weight of reception children (aged 4-5) and year 6 children (aged 10-11) in order to inform local planning, target resources and interventions, and to enable tracking of local progress against the PSA target (Department of Health 2006). The data thus collected is entered into the National Child Measurement Database (NCMD).

The implementation of the programme involves various individuals and institutions including children, parents, school nurses or child health technicians, schools, local PCTS and local and national Government. The programme raises critical questions concerning the effects of taking body measurements on children's experiences of their (obese) bodies, the nature and recognition (if any) of children's competencies to consent to measurement and the nature of informed consent in these circumstances, and parental compliance or resistance with the use of schools as sites for the quantification and production of healthy bodies.

Concern was expressed (Hawkes 2007; Crowther *et al* 2007) with regard to the organisation of the first data gathering exercise (2005-2006), which was not only very partial and potentially misleading in statistical terms, but also engendered feelings of victimisation amongst larger children and / or parents. Issues were raised about consent and the maintenance of privacy both at the point of measurement and subsequently, and for parents, a great lack of clarity about the purpose of surveillance (versus screening for example) led to disappointed expectations about treatment being available for obese youngsters.

In response to the concerns raised, the subsequent guidance for the 2006-2007 programme (DH 2007) addressed these issues directly. It provided clear advice on where the measurement should take place, as noted below:

> Schools will need to identify a suitable place on site where measurements can be undertaken to ensure privacy and dignity of the individual child throughout the process. A separate room or a screened off area must be provided. This is essential to reduce the risk of stigmatisation and should help to reduce levels of opting out. (DH 2007: 8)

In addition to this, PCTs were advised to help contain and minimise children's anxieties by situating the programme within the context of a wider concern with healthy lifestyles and physical activity. Recommendations were also

made regarding the improvement of communication between PCTs, schools and parents. This was done through the dissemination of comprehensive letters detailing the background, purpose and practices of the programme. This included information about the possibility of feeding back an individual child's measurement to the parents within one month of it taking place, after which the child's name would be removed from the dataset. This was intended to reassure parents and children that the programme is for monitoring rather than screening purposes, that 'the data will not be revealed to anyone in the school, and that all data will be anonymised' (DH 2007: 13).

The 2006/07 guidance to PCTs on the administration of the surveillance programme encouraged them to include all maintained primary schools in their area in the surveillance programme, but did not stipulate that independent or special needs schools be included. The former were omitted, despite the fact that it was recognised that 5-6% of the primary population are independently educated, for the pragmatic reason that it was recognised that PCTs may not have formed relationships with these schools. Special needs schools were omitted on the grounds that such measurements may be more likely to cause physical or psychological distress. PCTs were urged however to initiate work with these schools in an effort to make sure that interventions could be offered where necessary.

Aims and objectives

This project took the form of a pilot study prior to submission of a bid for funding to the ESRC in 2008 for a full-length qualitative study on this issue. This pilot study thus had the following overarching aims:

- to test in the field the most appropriate ways of working with schools, young people and other stakeholders on this issue
- to develop insights which could be used to inform theoretical sampling for the main study
- to deliver some preliminary audit data and qualitative information to allow NEPHO to feed into discussions about the improvement of the surveillance programme.

This was achieved through a combination of telephone interviews and two in-depth qualitative school studies in North East England.

Objectives were thus:

- to carry out a telephone audit of independent schools and special needs schools throughout the North East SHA region to ascertain rates of compliance with the surveillance programme
- to ascertain through the telephone audit reasons for compliance/non-compliance and problems/issues encountered in these two sectors
- to carry out qualitative studies in two school locations with contrasting levels of uptake in the 2005-6 exercise to ascertain perspectives of children, parents and teachers regarding the surveillance programme
- to synthesise the data in a report to NEPHO
- to field test appropriate access procedures and research methods which would help towards the construction of an ESRC proposal
- to produce at least one peer reviewed output.

Methods

The work was undertaken in two phases:

- Phase 1: a telephone survey designed to audit participation in the surveillance exercise amongst independent and special needs schools in the North East of England SHA
- Phase 2: two qualitative studies of selected primary schools to obtain in depth data on perspectives of professional staff, parents and children on the administration of the surveillance exercise on the ground.

Each is now described in turn.

Phase 1 (February-March 2007)

Phase 1 involved contacting all Independent and Special Needs schools with primary departments in the North East SHA area. Firstly the boundaries of the North East SHA were determined via a map of the SHA (http://www.northeast.nhs.uk/nhs-across-north-east-england). Each of the local councils which fell within this boundary was then contacted and asked to provide details of all special schools within that locality. Independent schools were located by firstly contacting the (then) DfES and obtaining their list of independent schools in the area and checking this against a search of the Yellow Pages and information from the Independent Schools Information Service. As independent schools do not have to be registered with an official body, this level of checking was required to ensure as complete a sample of these schools as possible. Once all of the contact details for special and independent schools were obtained these were compiled into a definitive list. A total of 43 special needs schools and 29 independent schools which provided primary education for Y6 pupils were found within the North East SHA boundaries.

Each school was initially contacted via a letter (Appendix 1) which included an information sheet (Appendix 2) that explained the purpose of the audit and what would be required from them if they decided to take part. A follow up telephone call was made by one of the researchers to ascertain if the school would be happy to be involved in the research. During this follow up call the researcher attempted to make contact with either the head teacher or a member of staff who was involved in these activities within the school in order to conduct the telephone interview.

Once a suitable contact had been made the researcher worked through the telephone interview with the respondent. Where it was discovered that the school had not taken part in the 2006 round of measurements the researcher worked through questions which aimed to capture reasons for non-participation in the surveillance programme but also included questions aimed to assess the level of support that would be required to aid their future participation.

Where schools had taken part the researcher again worked through a semi-structured interview which tried to ascertain levels of involvement of children, practical arrangements for measurement, staffing of the measurement activity, methods of parental opt-in or out, arrangements made for explaining the programme to children, integration of the measurement programme with other curriculum activities and problems or issues that arose during the administration of the programme.

Telephone interviews were recorded with the permission of the interviewee: the tapes were later partially transcribed and analysed to ascertain particular trends and themes.

Where it had proven difficult to make a suitable contact at the school a postal questionnaire was sent out (Appendix 3): this was merely a paper version of the telephone interview. It was hoped that this method of participation would aid response. Three weeks after the postal questionnaire had been sent, schools were sent an email reminder which included an electronic copy of the questionnaire. Once all responses had been obtained the data was collated and thematically analysed.

As this phase of the research was considered to be audit, ethical approval was deemed unnecessary.

Phase 2 (July 2007)

This phase consisted of in-depth qualitative studies of two maintained primary schools in the Middlesbrough PCT area. These were purposively sampled from data provided by County Durham and Tees Valley Public Health Network. Each school was chosen according to its level of participation in the 2006 round of the measurements (one high and one low uptake). Both schools were located, for convenience, in Middlesbrough PCT, to capitalise on existing contacts and to minimise the number of ethics submissions that might be required.

Ethical permission for this part of the study was sought through the School of Health and Social Care Ethics Committee. LREC were informed of the study but they agreed that it did not require their permission. Each participant received an information sheet and gave informed consent.

As with the audit phase of this research schools were initially contacted by a letter (Appendix 4) which also contained an information sheet explaining what the research was about, what would be required from them and what the research hoped to achieve. The school was then also contacted by telephone to clear any questions staff may have had about the project and to see if they were happy to take part. The research team then had a meeting with each of the head teachers to discuss the research and to organise timings for group work.

Fieldwork at each school involved the collection of data from documents, from observation, and individual and group interview with teachers, parents and children.

Observation of the 2006/07 measurement session at each school took place following liaison with the headteacher and the school nurse in each case. One researcher was present at the measuring session in school one and stationed herself so that she could both see and hear the queues of children waiting for their measurement and subsequently exiting the room. Two researchers were present at school 2, allowing not only observation of the queues but also inside the measurement room itself. In this way researchers were able to observe both the logistics of the exercise and the interaction between the children. Written field notes were taken on both occasions which were subsequently typed up and shared within the research group.

Individual and group interviews took place in the week following the measurement exercise. With respect to the composition of the focus groups with young people in year 6, it was the intention to select four young people (two girls and two boys) randomly from the class register. The four chosen children were then required to nominate two friends to also take part in the discussion activities. This would have given us the required sample size of six boys and six girls from each school and would have ensured that young people were potentially in small single-sex friendship groups giving them more confidence to speak their minds in a situation with an adult researcher. Each head teacher agreed to this strategy. Letters and information sheets (Appendix 5 and Appendix 6) were sent to parents of children selected for participation in focus groups. Parents were required to sign an 'opt in' consent form (Appendix 7) to allow their child to participate and were required to send it back to the school.

An appropriate sample (n=24) of young people was achieved in each schools. However, it became apparent when talking to the young people that they had not been chosen in the prescribed way but rather had been told they had to take part by their teachers. This is clearly an issue which must be seriously considered if this is taken forward to a full-scale ESRC project.

Interviews with young people were carried out in the staff room of one school and in the library in the other. Children were keen to participate and confident. The researchers in each case explained the purpose of the exercise, and worked with the young people through the statements on the consent forms, which were then signed and returned to the researcher.

Focus group discussion was based on the use of vignettes (Appendix 8) drawn up by the research team. The purpose of these was to highlight some of the potential feelings roused by the measurement exercise, and to see whether children recognised and identified with the issues sufficiently to discuss the matter, without personalising the discussion and asking young people to express personal concerns and worries in a group setting. Despite an emphasis on confidentiality in the group, the researchers were keen to avoid individual young people revealing personal problems which might allow them to be subjected to pressure or bullying subsequently. A final exercise in the group discussion was the distribution of sheets which children were invited to fill in individually rather than as a group effort. It was emphasised that the sheets were private and intended to give them their own opportunity

to say what they felt about the measurement exercise. Completed sheets were to be posted in a box with a slit and would be available only to the researchers. The sheet invited children to select from a range of 'emoticons' to say what they felt about the exercise and then to add a comment in their own words if they felt so inclined.

Group and individual interviews were also undertaken. Recruitment of parents was very difficult. Initially the intention had been to recruit through existing parent groups at the schools. However, it became apparent that neither of the schools had ready-formed parent groups. Recruitment of parents was then discussed with the head teachers. In school 1 some of the teaching assistants had children in Y6 so they were approached to take part. In school 2 however, this method was not appropriate as no parents worked or visited the school regularly. Therefore a letter was sent out to all parents of year 6 children inviting them to take part in focus groups at predetermined times. The majority of parents did reply. However, only one took up the offer to be a part of the research. Regrettably this parent did not turn up on the day of the interview. This gave a total parent sample of three over both schools. Again, therefore, the sampling strategy would need to be reviewed and revised for any future study. The interview guides used with parent interviewees can be found in Appendix 9.

Headteachers and teachers of year 6 pupils were also interviewed individually or in small groups (n= 4 across both schools). All group and individual interviews were recorded with the permission of the respondents and subsequently transcribed and analysed.

Results

Audit

Forty three special needs schools and twenty nine independent schools from across the North East Strategic Health Authority area were contacted to take part in a telephone audit. Letters were sent to each school inviting them to give their views and share experiences of the 2005/06 roll out of the BMI Surveillance programme (DH 2006).

Of these schools fifteen special needs and thirteen independent schools agreed to take part in the telephone interview. One special needs school and nine independent schools refused to take part in the research. The remainder did not reply despite several approaches.

Postal questionnaires were sent to the remaining schools where contact for a telephone interview had proved unsuccessful. Five further special needs schools and two independent schools responded to this and returned completed questionnaires.

This gave an overall response rate to the audit of 46.5% for special needs schools (n=20) and 51.7% for independent schools (n=15).

Special needs schools

Overall six of the special needs schools interviewed had taken part in the 2005/06 roll out of the programme. In most of these cases the school nurse had insisted that the special needs schools should be treated the same as the state schools in their locality. One school nurse stated:

> *'I have a big thing about children with special needs being excluded.'*

This feeling was shared with many school nurses from special schools. So much so that one school nurse measured the only Y6 pupil in her school and sent the information in centrally.

A head teacher from one of these schools stated how their local council had a 'new Y6 initiative' where they just sent someone to weigh and measure the children. The school had not questioned the initiative and thought that it was just another one of those things that happened in schools now. In this particular school, a nurse from the PCT came and took care of everything so there was minimal disruption to the staff and pupils.

However not all of the special schools that were invited to take part in the measurement programme responded so positively. Two special schools had been invited to take part in the 2005/06 roll out but had declined. One of the reasons offered for this decision was that they were worried that children who belonged to small year groups might feel they had been singled out and therefore react adversely to the situation. There were also concerns that this practice of taking measurements would lead to derogatory labelling of the children:

'I do not subscribe to this bombardment of, even the name, the obesity strategy made me cringe. Because working in a school like this we do not label children at all. And we certainly don't label children with negative or derogatory labels. '

The emotional stability of the children who would be measured was also a concern of some schools and it was felt that inclusion of these children would have to be dealt with on a case-by-case basis. Some respondents averred that this method of inclusion would not give a true representation of the height and weight of all children in a particular cohort.

Some school nurses believed that children in special schools should not be included in such an exercise, as having weight issues (both under and over weight for their height) was likely to be a part of their condition or disability. These schools stated that the eating habits of these children were dealt with 'in house'. This gave rise to the feeling that including these children within a mapping study would 'skew' the data and give a false reflection of the prevalence of obesity, not only in these types of schools but nationally.

Twelve of the special schools had not been informed about the measurements being taken at all, and there were mixed reactions from staff about the possibility of these schools taking part in a future measurement activity.

In many schools that had small cohorts of Y6 children there were reservations that in cases where only one or two pupils were of the required age for measurement they could be identified from a larger data set. This raised fears about the anonymity and confidentiality of the measurement dataset. Moreover, it was suggested that such an activity could make the children in question in small year groups feel singled out.

However, the majority of schools said they would be happy to take part in such an exercise as long as they were offered relevant support to carry out the measurements, possibly through the help of a nurse from the PCT, as suggested in the 2006-7 guidance. Participation was also facilitated if the school was confident that there were to be no negative repercussions for the school as a whole as a result of the measurements.

Independent schools

Of the fifteen independent schools which took part in the telephone audit just one school had been included in the 2006 measurements. Their experience of the measurement programme had been a positive one. As had happened in one of the special schools a PCT nurse came into the school and carried out the measurements so that there was minimal disruption to the school involved. The head teacher believed that independent schools should be involved in the wider community and take part in initiatives that take place in state schools:

'Independent schools are part of the community and ought to be involved in the community.'

However not all of the independent schools were so positive about the measurements. One independent school had been invited to take part but had declined. This decision was made on the basis that independent schools are asked to take part in many initiatives but unfortunately there isn't enough time and resources to carry them all out. The head teacher suggested that the only way his/her school would take part in such a programme would be if it became a stipulation made by the Government.

Other schools held a less negative view of the measurement programme and one nurse was very keen to have her school included in the programme. She had heard about the measurements being taken in all of the state schools through her network of school nursing colleagues and had wanted her school to be involved. However, upon contacting her PCT to ask if her school could be involved she had been told that independent schools were not able to be included in the exercise.

Finally twelve independent schools had not been made aware of the measurements taking place at all. Independent schools commonly stated they were not invited to take part in many activities that state schools were, sometimes to the extent that they did not even receive SATs information each year as they were not automatically included on the mailing list. This was a major barrier to taking part in the surveillance programme. Many of the schools stated they would like to take part in such activities as they try to be involved in the wider community. Like many special schools, independent schools suggested they would be happy to take part in such a programme if they were offered sufficient support from the PCT.

General audit findings

Some general issues were brought up by schools about methods of obtaining parental consent and the difficulties it posed with regard to the participation of children in the measurement scheme. These are demonstrated by the following quote:

> *'As school nurses we found it depended very much on the head teachers. If the head teachers weren't on board sometimes they changed the letter so that the parents had to opt out, Sometimes they changed them so that the parents had to opt in. And obviously then that excluded a lot of children because parents didn't remember to send the letters back or didn't send the letters back. And then one thing we found was if there was one parent in a class that was particularly against it, they would quite often sway other parents. If you had one refusing consent then you would usually have five or six.'* (Special school nurse)

Although, there were schools which had parents raising concerns about the measurement of their child, these concerns were often overcome by explaining exactly what would happen to the child and the measurements once they had been taken.

It is also interesting to note that one school responding to this study raised concerns over the publicity in the early part of 2007 about a child in

Gateshead who was faced with the possibility of being taken from his family home and placed in care (although this was clearly not an issue at the time of the 2005/06 surveillance programme). One particular school felt that the measurement exercise might lead to children being taken into care as a result of the findings. Therefore this would make it more likely that they would be cautious in taking part in such an activity.

Some schools felt that if these measurements were not mandatory it would not be worth the disruption of taking part in the exercise and some felt the pressures to take part in many different programmes and initiatives were already too intense without adding another one into the mix. However, most schools stated that if the PCT strongly recommended that they took these measurements then they would be happy to oblige.

Other schools felt very strongly about the use of time and resources which had to go into rolling out such a measurement programme nationally:

> *'I would want to know their full reasons why, when there are so many necessary things that I believe our children need from the PCT, aren't delivered. But this, which I believe is overkill, as far as I'm concerned, is just not an appropriate use of funding. '*

However, in contrast, one independent school had a more positive view of the measurements and was interested to find out if they could be used to the advantage of the school. They were particularly interested to find out if the measurements could contribute to a BMI league table and schools could use their position on such a league table in their promotional material.

School study

Making sense of the surveillance programme

In this section, the report will draw upon the qualitative study data in order to discuss the ways in which the different individuals involved in the weighing and measuring of children (i.e. children, parents and teachers) made sense of the surveillance programme. This is particularly important to examine, given the need to consider the dissemination and quality of the information provided by the PCT and school to all individuals involved and the context in which decisions surrounding consent to participate were made. This section of the analysis will be split into four main themes:

- What is the surveillance programme?
- Understanding the unit(s) of measurement: metric versus imperial
- Sharing measurements
- Making sense of children's body size

Firstly, it is interesting to explore the ways that the different individuals made sense of the programme, particularly in relation to its place within current public health obesity policy. There was a general awareness amongst children and parents at both schools that the programme was related to a Government-led approach to prevent and reduce obesity. Answers to the

question as to why the measurements were taken included *'Too much obesity'* (Boy 2, School 2, Interview with Boys); *'I thought it was fine to get weighed and measured because it's helping our Government innit?'* (Boy 3, School One, Interview with Boys); *'Because they're thinking that children are getting bigger'*, (Boy 2, School 1, Interview with Boys); and *'To keep obesity down and things like that'* (School One, Interview with Parents). This is interesting given the Department of Health's (DH 2007) desire to frame the measurement programme within the context of healthy lifestyles rather than 'body size'. It therefore is important to consider the means through which children are getting certain messages about the programme.

Some children were also not clear as to what would be happening to the measurements after they had been taken. For example, in the interview extract below, girls from School 2 discuss their mixed understandings of the programme, from it being either an exercise in finding the 'average' weight and height to whether it was a more intrusive procedure that would involve children being told if they were overweight or not:

R: *And what was the other thing, oh yeah about not knowing what happens to measurements, do you know why they did it?*
G1: *No*
G2: *No*
G3: *Isn't it just to get an average of everybody in Year 6, how much they weigh and how tall the average is?*
R: *Yeah*
G4: *I was scared if they were gonna tell me if I was overweight or underweight*
All: *Yeah*
G2: *Yeah I was. I thought they'd go like, 'You're obese' or something*
All: *Yeah*
R: *Like they were gonna tell you there and then on the spot?*
All: *Yeah*
G5: *Or like go into the class and read out your names and say, 'You're obese' or whatever*
All: *Yeah*

(School Two, Interview with Girls)

Clearly this interview extract exemplifies the confusion and fear that some children felt about the purpose and practices of the programme. Indeed, a teacher at School 2 had to reassure some children who thought that they would be judged according to their measurements:

> *'I said that to some this morning. There were some girls who hadn't been signed off but were getting very freaky about it, so I explained that it wasn't a personal thing.'*

Moreover, this conversation with the girls from School 2 is reflective of a wider issue that arose when talking to the teachers concerning the programme's intention to calculate every child's BMI in order to collect population level data. This uncertainty about the exact purpose of the measurements, again

counter to the Department of Health's objectives behind the letters sent out to all schools, is illustrated below in an extract from an interview with the head teacher from School One:

R: *What did you receive from them, just out of interest?*
H: *I can't remember, I don't know if I received anything of any great bumph really*
R: *Just that we're coming into your school, prepare yourself (laughs)?*
H: *Oh yeah I've got all the stuff but I'm not sure, I just read it all through and it all made sense but I'm not too sure if there was a definition of childhood obesity. If it was it didn't draw my attention to it. I don't know… I mean presumably there must be some sort of index or some sort of figure*
R: *Yeah, well they work on the BMI*
H: *Well what is?*
R: *I couldn't tell you, I don't do the measurements*
H: *I don't even know, I should know how you work your BMI out. Is it your height divided by the first number you thought of or something?*

(School One, Head Teacher)

Whilst the head teacher did not know the exact details of what would happen to the measurement, another teacher voiced a deeper concern that the collection of children's BMI measurements was illustrative of a wider shift in Government policy to assess and obtain data about each individual child:

> *'Well we're forever assessing them for everything… you know English, writing level… everything gets it. Why wouldn't they be levelled on height and weight and everything else to yet another piece of information that's gonna go somewhere about them into a big file? Everything else about them is. We have rooms full.. huge files full of every bit of information of every move that they make. Quite why they're keeping it I don't know. Scares me a bit really. Don't think I would like people keeping all that information about me necessarily.'*
>
> (School Two, Teacher)

These particular understandings of the programme are not so much about a deficiency in knowledge but a fear that the collection of even more data may infringe personal privacy and be used for purposes as yet unknown. This is reflective of a wider issue concerning the confusion as to whether the programme was for monitoring or screening purposes; the latter of which would involve the use of the BMI to 'diagnose' individual children and implement treatment accordingly. Some teachers felt that the programme would be more effective if it *was* run as a screening programme. For example the head teacher from School One stated:

> *'I think kids are inquisitive, so yeah it would be good. I mean the ideal model would be for people to have time to sort of work out the statistics of each individual kiddy and have a personal feedback to the parents for*

those that may or may not have concern.'

(School One, Head Teacher)

This preference is narrated as being for the benefit of the children so that appropriate action could be taken with those children that needed help. As previously mentioned, this year parents could request their child's measurements within one month of them being taken. Parents are then advised to consult the Department of Health 'Why your child's health matters' leaflet for information about how to interpret their child's result. However, it is questionable whether the raw BMI figure and the leaflet alone would be adequate for parents and children wanting advice about how to treat and manage a child's weight. A new pilot site (www.direct.gov.uk/childweight) was launched to support the 2006/07 guidance, which includes further health advice and an online child BMI calculator. Further evaluation of this online resource and an assessment of access inequalities will help to determine whether this fulfils these information requirements.

A key finding when talking to the children about being weighed and measured was that they did not understand the units in which they were being measured. Many children were used to making sense of their height and weight in imperial measures (feet and inches, and stones and pounds) rather than metric measures (kg and cm/m) and this often followed the unit of measurement used by the parents at home. This meant that the actual measurements that were taken did not mean a great deal to the children and many wanted the nurse to convert the numbers into a measurement unit that they could understand. It further suggests that it is not only the *purpose* of the programme that children have difficulty in discerning but the *actual measurements* being taken of their bodies. The following four examples from field notes and interviews with children and teachers exemplify this point:

*'A couple of boys ask for their height. As the session goes on it emerges that children are very confused about what the numbers mean. They are being measured in metres and centimetres for height and kilograms for weight, and although these are the units in which they will also do maths calculations, one suspects that imperial measures still rule at home. They are all trying to convert feet and inches or stones and pounds**.'***

(Research Diary, JS, School Two)

G1: *They didn't actually tell you how much you weighed in stone and everything. They told you in kilograms so you didn't actually know like how much you weighed in stone and everything*
R: *Right, so you didn't understand what they converted to?*
G1: *No, cos in weight we usually use stone*
G2: *Stone and pounds*

(School One, Interview with Girls)

G1: *Yeah if you wanted to know you could just say 'Can you tell me my height please?' or they could say 'Do you want to know your height?' cos some people do*

G2: *The women that was writing it all down… I asked her how much I weighed and what my height was and she said, 'Oh I don't know; it's in kilograms.' Then I walked out and she went, 'You'll have to work it out though cos I can't work it out'. That's what she said so…*

(School One, Interview with Girls)

R: *Who weighs themselves at home, have you got like bathroom scales?*

G3: *I do*

R: *So you probably know already how much you weigh?*

G3: *Only in stones, not kilograms*

G4: *I don't understand all the rest of it*

R: *I'm just interested; when you weigh yourself do you weigh yourself in like pounds and stones or in kilos?*

All: *Stones*

(School Two, Interview with Girls)

It is interesting that children wanted to know what their weight was but were unable to make sense of it. In addition to their difficulties with the unit of measurement, it is worth noting that these extracts reflect the Department of Health (DH 2007) guidance that after measuring a child, the healthcare staff should not make comments about the child's measurement and that their BMI scores should not be fed directly back to them. The data collected suggests that children actually want to know their measurements, particularly their weight and despite the efforts of the healthcare staff children could look down at the scales to see their own measurements.

From the previous examples it is obvious that the children had difficulty in understanding what exactly the measurements meant for their bodies because of their unfamiliarity with metric units of measurements. However, it was made obvious to us that children either wanted to know their own and each other's measurements or they were concerned about other people knowing. The boys from school one discussed how the measurements were not told to them by the nurse, as stipulated in Department of Health guidelines, but that this served to create an unnecessary mystery surrounding being weighed and measured:

B1: *They never told me about how much, how tall I am*

B3: *They never told us, they never*

B1: *They only said how much I weigh*

R: *Would you have liked them to have told you how much you weigh and how tall you are?*

B1&3: *Yeah*

B3: *They said 'oh thank you' and they went to keep going with the next person*

B1: *It's like a big mystery* (School One, Interview with Boys)

However, amongst the girls from both School 1 and School 2 a different set of concerns were raised. In the example below, the girls discuss the potential benefit and harm of being told their measurements:

G4: *Well I think they should tell you the average of what you should weigh, and then tell you what you do weigh, so that you know that you're underweight or if you're overweight. If you were a stone overweight you'd need to lose a stone*

R: *Right, so if they could tell you for your height you should weigh between this and this and this is what you are and you fit in between those…?*

G1: *They shouldn't make it like a big deal cos like a lot of people might say 'oh I need to lose a load of weight' and stuff, when maybe they're just a couple of pounds overweight, but they should just tell you the average and then your weight*

G2: *Cos in Year 6 like half of the girls feel they're over weight and half of the girls feel they're overweight but they're not. Like XXXX and XXXX - they're really skinny and everything so I think that people should know cos my cousin she's really skinny and she got this done [the BMI measurement] and she got told how much she weighed and she's put two stones on and now she's on the average cos it looked like she's really skinny so I think you should know because if you get too skinny or if you don't feel happy with your weight if you're overweight.*

(School One, Interview with Girls)

Here Girl 4 suggests that knowing your measurements would be useful for finding out whether you were underweight or overweight. However, Girls 1 and 2 voice a concern with this because of the danger that some children might feel that they have to lose weight when they don't need to; thus suggesting that the measurement itself could produce unnecessary dieting behaviour.

Another concern expressed by children was whether other children in the vicinity of the measurement room could hear and/or see their measurements:

G1: *Some people could find out how much they weighed cos they hear how much they weigh if they're standing outside and they could like spread it to other people so it would make them unhappy and everything*

R: *Could you hear people being measured in your line?*

All: *Yeah*

R: *Could you hear the measurements?*

G1: *Some of the daft boys went right up to the door and tried to sneak in*

G2: *Yeah some of them were like actually standing outside the door listening to other people*

G1: *But a lot of them just told you the measurements anyway, a lot of the children just shared them*

R: *And they weren't bothered about how much they weighed?*

G3: *Yeah but you know if someone doesn't tell you what their measurements are you know that they're probably overweight or too tall or something like that.*

(School One, Interview with Girls)

It is obvious that in this case some children were sharing measurements with each other and others were 'listening in' to hear the measurements being taken. The difficulty of finding accommodation in schools in which to undertake the measurements made it difficult to pay more than cursory attention in both the study schools to issues about privacy when selecting a location. Observation notes show that height measurements were taken first and shouted across the room to an assistant. Not a word was said by nurse or assistant when weight measurements were taken on the other side of the room however.

Girl 1 in the quote above suggests that this could make some children unhappy because their measurements could be spread around. This accidental and purposeful sharing of measurements could also be a contributory factor to children opting out on the day of measurement, which will only increase low response rates.

In this section, the focus is on the ways that the different individuals involved in the measurement programme 'made sense' of bodily size. By this we mean the different ways that thoughts about the size of children's bodies were narrated in relation to their participation in the programme and the effects that drawing attention to body size can have on children.

The head teacher from School One observes how children in Year 6 are already becoming conscious of their body size, which coincides with the time that they are being weighed and measured for the surveillance programme:

> *'It's not as if I'm trying to put my kids at risk. I'm not at all but I think we've developed a culture where it's understandable that there's a concern that lots of kids get overweight because they do that and then that feeds this bad self image because they see all these skinny skeleton women in the paper and then what happens is they get to Year 6 and they do get very self conscious and that just compounds itself in secondary school.'*
>
> (School One, interview with Head Teacher)

Indeed, there was evidence in both schools that particular children were feeling self-conscious about their bodies during the measurement and in some cases, because of their unease, opted out of the programme. For the teachers, it seemed obvious that those children who were most self-conscious were the 'chubby ones' or the 'skinny ones'; those children identified by the teachers from an assessment of their outward bodily appearance:

H: *No I haven't cos I've just let you get on with it really, I know that the kids have gone on and done them. One or two kids were a bit self conscious. It was interesting to see the ones that turned it down*

R: *Did they give any reasons?*

H: *They didn't but if there was a common denominator they were all a bit chubby and I would suspect that they were self conscious of their size already which is a worry.*

(School One, Interview with Head Teacher)

'There were people in our class who are like average for being a Year 6 and they didn't want to get it done and said 'Oh I don't need it done,' whatever. I'm small and like these two are sort of bigger than me that means like we would have got weighed or something like that.'

(Boy 3, School One, Interview with Boys)

This supports the anecdotal evidence reported during the 2005-6 programme although it is important to highlight the difficulties children experienced with being 'small' as well as 'big'. It is also interesting to note the gendered difference relating to which particular measurements the boys and girls were most concerned about knowing. Teachers and parents both identified that - for boys - height was of more importance, but for girls it was weight:

'Particularly with the boys cos that's where the competitive element comes in but with the girls it's obviously like, unless you're as skinny as a rake, then you're obviously over weight and that is an issue for some of the plumper girls.'

(Teacher 1, School One, Interview with Teachers)

The school as a setting for BMI measurement

In this section three themes are developed that relate to the role of the school as a site for BMI measurement. This is important to consider, given the increased emphasis in Governmental public health policy that is currently placed upon schools to act as the site for the promotion of 'health' and wellbeing, including healthy eating, physical activity, school dinners, mental health and sexual health.

The themes are:

- Responsibility for children's bodies between parent, child and school
- Children's competence and consent to procedures
- Schools as appropriate sites for health measurement and screening

The extent to which parents, teachers or children are responsible for the child's body comes through as an interesting thread in the data and relates to notions of competence discussed in the next section. Generally parents were held to be responsible for the care and control of their children's bodies, with young people gradually assuming responsibility themselves for different aspects of body care and maintenance. At this primary stage, however, teachers acknowledged that children had little power in the context of the

home to make decisions about what they ate in the face of prevailing family practices.

> *'I think it's very hard at this age because a lot of children, yes they are overweight, but it's the choices they're given at home that they may try to influence but obviously don't have a tremendous influence on at that early age. It's not until they can really be established in secondary school that they can start throwing their weight about, what they are and aren't going to eat.'* (School 2, Teachers' focus group)

At the same time, it was felt that education given to children at school about 'healthy eating' might give them ammunition to challenge family convention. This puts more responsibility on the child to evangelise about health in the family context.

> *'But it also gives you more ammunition to actually talk about it at home. I mean obviously when I was a lass there was no conversation it was just 'there's your tea and eat it and if you don't you get into trouble'. But I know with my own children now they are a lot more picky and we do 'have you had your five fruit and veg?' 'umpph'. And you know if that's going on in my house there must be a lot of other houses where that conversation is taking place. It's the houses that it isn't….if a child does have this ammunition they may be able to initiate it [the conversation] about healthy eating] cos there's so much in schools now, they get hammered… healthy eating, there's PHSE, Science and now the medical side of it as well.'*
>
> (School 2, Teachers' focus group)

Both parents and teachers felt that it was appropriate that parents were asked for permission before their child's body could be weighed and measured, reinforcing the 'ownership' of the child's body by the parent and reflecting the Department of Health's guidelines (DH 2007: see page 13). However, this decision does have the effect of sidelining children's capacities to consent to the measurement themselves.

The process of gaining consent from parents for the measurements looked disorganised in both settings. Children are entrusted to carry sealed letters home and then bring them back to school if the parent wishes to opt their child out of the programme. or letters are forgotten or lost, and confusion reigned on the day as to which children had been opted out by their parents. On several occasions children turned up to be measured despite their parents not having given consent, and the reverse also happened.

Discussion at home about consent had mostly been desultory, it would seem.

> ***P2:*** *She was quite ok at first but I don't think she was really listening when I was talking to her (laughs) and then afterwards she said 'oh I don't really want to do that if I get weighed and measured' and I said 'well I've sent the form, is it a problem?' And she said 'oh go on then I'll do it. 'So it was a bit… she was a bit unsure*

P3: *I don't think XXXX [daughter] was too worried about it; she doesn't need to be really*

P2: *I said that to XXXX [daughter], I said 'you've got nothing to worry about.' She said 'ok then that's fine.'*

(School 2, Parents' focus group)

Most parents had not seen fit to make an issue of it, and were not keen for their children to do so. This was done in order to minimise the potential harm that could be done to the child with regards to giving too much emphasis to body size at such a young age:

> *'That's right. There's so much going on and I didn't want to make a big deal about it cos you've got to be careful at this age. Cos they're touchy about it. They're changing you know, they're developing and you've got to be careful, haven't you, when saying something? So I didn't want to go too deeply into it.'*
>
> (Parent 2, School 2, Parents' focus group)

Indeed, children themselves expressed an interest in being given greater opportunity to withhold or give consent:

R: *Did your parents ask you if you wanted to take part, did they give you the opportunity to say 'no I really don't want to do it'?*

B1 & 3: *Yeah*

B2: *My mum just made me do it*

B1: *I was just getting ready and I just said 'yeah'*

R: *Do you think you should be asked again? You know like when you come into the room and you're on your own, if the school nurse said to you 'Are you happy to take part, I know your mum said yes but are you happy to take part,' would you think that would be a good idea?*

All: *Yes*

(School 1, Boys' Focus Group)

The idea of children having the right to give or withhold consent almost seems ludicrous in the school setting, since so much of schooling involves children being 'done unto' without question, and, as some teachers themselves remarked, even teachers in schools are usually co-opted rather than asked if they want to participate in activities like our research interviews.

Teachers in one school debated whether it would put children in an invidious position if they were given the right to consent or decline separately from their parents:

R: *So what about consent, do you think that the parents should be the ones that have over ruling consent for the children to take part or not take part? Or do you think the child themselves should be allowed to say 'I really don't want to do this' on the way? Or if their parents opt them out should they be able to opt themselves in?*

T2: *My own personal opinion, as a parent, is that parents need to be parents and if the parent says 'no' then it's 'no,' if the parent says 'yes' then it's 'yes,' that would be my honest answer*

T1: *mmm and the other thing, I can see where you're coming from in that if the parents are the negative force let the children have a chink of light and see the light as it were but on the other hand then you're just giving that child a just even bigger burden, you know are they going to lie to their parents, are they going to tell the truth and get into an almighty row with their parents. So I think it's very much a double edged sword and I wouldn't personally like to put a child in that position of going against a parental wish at this early age, next year it will be different.*

(School 2, Teachers' focus group)

Many adults, both teachers and parents, expressed the view that if children were given the right to consent in their own right with regards to the BMI measurements that there would be a host of refusals for the fun of it, or little flurries of panic and hysteria that would cause mass withdrawals. On the whole children were not considered competent by adults to make decisions about their body on their own.

One head teacher made it clear that, in his view, the job of the parent was to discuss things with children in an appropriate way, but sometimes to make decisions for them, even against their wishes, if it was in the longer-term interests of the child:

'In Year 5 I have a meeting with them [the parents] and one of the things I say in that meeting is that 'I would really like you to talk to your children about their transfer to secondary school but I have to stress in my opinion that this is an adult's decision to make because this decision is a really big decision and whilst your son or daughter probably just wants to go with their mates, you need to check just by going with their mates, that's the right environment for your son or daughter to blossom in, so I would stress that you need to make it [the decision]. .. It's not wrong, there's nothing wrong with saying no. In fact it's quite good to say no if it's for the right purposes and done the right way with all the love and care. I think this [the BMI measurement] is another example…I think the system of asking permission is fine, but if you want to say who should have the decision, I think it should be the adults, I'm very cautious of giving 10 or 11 year olds final decisions on things.'

(School 2, Head Teacher)

Another teacher picked up her own ambivalence about this matter:

'Ok confidentially, children get too many options. We're constantly asking them what they want and what's ok with them and I don't think it's necessarily healthy for their upbringing that they now swan around and you can't do anything with them. ..

So on one hand I would say yes, sure, why force them to? On the other hand, life is about doing things sometimes we don't agree with, (laughs) let the parents decide and for the rest children should be doing what they're told, at the age of 11 (laughs). We should still have that much power over them to say 'I'm sorry, this is being done, it's not your choice yet, get a bit older and then you'll have a choice' but equally I appreciate the whole 'letting them choose' things, I wouldn't deny them choice.'

(School 1, Teacher Interview)

Schools are often reluctant hosts to events such as the BMI measurements. Observation notes from both case study schools indicate the difficulty of finding appropriate spaces in which to carry out the measurements. Odd corners, sick rooms and staff rooms all get pressed into service and are unsuitable in various ways, not affording appropriate privacy. In School 1 teachers continually re-entered the staff room during measurements, increasing the self-consciousness of the girls in particular. As mentioned previously, the fear of being watched by others has been identified as one of the reasons why some children opt out on the day of measurement.

Apart from the busy-ness of the school premises, the crowded curriculum and demanding school programme means that any extra demands such as participation in the BMI surveillance, are usually attended to with only half an eye on what they involve. Thus whilst schools had received information from the PCT about the exercise, it was evident that head teachers had paid it only cursory attention and that none of it had filtered down to class teachers, who usually attempted to use the researchers as information sources on 'what had been going on'.

R: *So it's just this year really. Were you given any information about the measurements before they actually happened?*
T1: *I certainly wasn't, no*
T2: *This time?*
R: *Yeah*
T2: *No, nothing at all*
R: *So the nurses just turned up on the day?*
T1: *And started whisking children away, yes*

(School 2, Teachers' focus group)

Teachers had therefore been given no guidance on how to answer children's queries about the exercise or how to reassure those who were concerned. This is contrary to the Department of Health (2007) guidance concerning the dissemination of information about the programme through letters sent to the head teacher. It is also interesting to note the lack of awareness about the 'questions and answers' for/to children within the guidance (see page 19) which, in this instance, would have eased both the children's and teachers uncertainty about what was happening on the day.

Parents tended to see schools as appropriate sites for health promotion, citing peer pressure as having a positive impact on children trying new foods etc

'I think in the school they want to be like their peers don't they and they see everybody eating an apple and they're not having anything and there's no more choice so it's an apple or nothing so they then try it and think 'oh it's alright this'

(School 2, Parents' focus group)

Teachers and head teachers were happy enough to take on responsibility for health promotion, but were keen to make clear that (debates about tuck shops and school kitchens aside) the responsibility for eating problems or obesity related conditions lay with families, and that this was deep-rooted. One head teacher noted that year 6 field trips were occasions when it became obvious how few children knew how to eat at one time at a table and to use cutlery for example.

'Like you know the Jamie Oliver thing was a classic example. Let's all have a go at the school cooks. Well ok there might have been areas and aspects where that could have been improved and has been improved but the truth of the matter is that, that won't make any bit of difference to the overall package for a kid if mum and dad aren't talking about eating fresh vegetables, aren't cooking fresh vegetables, aren't saying 'come on lets get our bikes out and go for a family bike ride, you can go over there and ride.'

(School 2, Head Teacher interview)

Overall schools appeared to have accepted a health promotion role (whilst feeling that the root of the problem lay elsewhere). They did not express a great concern to be part of either screening or surveillance of children's health, but any resistance to using the school as a venue for such activities was muted and somewhat resigned.

Discussion

The telephone audit of special and independent schools revealed that their involvement in the 2006 measurement exercise was patchy, and, in the case of independent schools, almost non-existent. Involvement on the part of special schools was often determined by locality and the school nurse's insistence on them being included in the exercise. However there were resistant schools who expressed their opposition at being included in such an activity on different grounds.

Special schools seemed less happy to comply with the exercise and often felt they were protecting the interests of vulnerable young people who often were not able to make these decisions for themselves. Weight problems can often be a part of the child's disability profile and it was argued that BMI measurements were in these cases not relevant and holds little actual meaning. The eating habits of children in special schools are often monitored 'in house' and any issues were already attended to via the school nurses. It was felt in many cases that collecting data from these children with particular issues surrounding eating, food and weight would negatively impact on the findings of the measurement exercise and skew national results in an unhelpful way.

Similarly the ways in which some children's problems are physically manifested could cause logistical and practical difficulties problems in gaining measurements which would have to be met by providing better equipment and staffing (dependant on involvement of PCT nurses). The size of cohorts in many special schools was also raised as a barrier to taking part in the measurement activities. Inclusion of children from small cohorts may make the children feel 'singled out' and 'picked on' which in turn could have a negative impact on children's difficult behaviours and on self esteem.

Independent schools expressed more willingness to be involved, and there were no real objections in principle (as in the case of the special schools). However, many would clearly only participate if it were made a compulsory requirement.

Although the schools chosen to participate in the qualitative phase of the project were selected on their level of involvement in the 2005/06 rollout of the measurement programme (one with high levels of participation and one with low levels), rates of participation in the 2006/07 round of measurements seemed to be high. The process was relatively speedy and trouble free. In general schools accepted their role as offering a site for the roll out of the surveillance programme but were not involved in the planning or implementation of the measurements on the day. Moreover, they also accepted responsibility for the promotion of health in school through initiatives, such as Healthy Schools, but saw the specific origins of obesity related problems lying elsewhere, mainly within family cultures.

However, upon attending the measurement sessions in both of the schools it became clear that little attention had been paid to the briefing information

received from the PCT. This was evident in the interviews conducted with the teachers. Insufficient information was passed on to them and almost no attempt was made to incorporate the measurement programme into the children's curriculum or into wider health initiatives organised in school. Moreover, in some instances, the space used for taking the measurements was not conducive to maintaining privacy or preventing the public dissemination of measurements, as recommended in the Department of Health (DH 2007) guidance. This meant that it was inevitable that children would undertake peer comparisons.

Children generally had a poor understanding of the measurement programme for a number of reasons. Firstly, they did not understand the metric units in which height or weight was expressed, and also because they did not have a standard against which to compare themselves. Secondly, children with little evident reason for anxiety also expressed concerns which were based on the fact that the process of the measurement was never explained to them in advance and they were unsure as to what would happen to the measurements. This second point is reflective of an unease amongst parents and teachers who were unsure as to whether the programme itself was a surveillance exercise (rather than a screening event which would result in a referral and/or intervention).

Parental opt-in consent was normal, if occasionally rather scattily organised via the letter sent out from the school and PCT. There is some evidence that heavier children were being withdrawn from the exercise because they were anxious about being measured in school. In addition, there was some confusion on the day amongst those children who had been opted out but still wished to be measured. Similarly, there were also children who wanted to opt out on the day because they didn't feel comfortable being measured. It is interesting to note that whilst children's consent was not sought *per se*, they were asserting their own right to consent on the day. Many adults (teachers and parents) actually rejected the idea of giving children the right to consent on their own behalf.

Recommendations

New guidance for the 2007-8 round of measurement has recently been issued (DH/DCSF 2007). This project, among others, was able to feed preliminary results into the discussion around the revision of arrangements. Where recommendations in this report are now part of the new arrangements, they are shown in brackets and italics below.

- That special schools should continue to be exempt from the BMI surveillance programme.

- That independent schools should be incorporated into the exercise.

(This recommendation has been incorporated into the 2007/08 guidance (section 3.2.2) which encourages the inclusion of independent schools.)

- That Government and PCTs should look at producing information in a concise form that makes it more user friendly for head teachers and teachers, so that they in turn can act to dispel fears about the exercise and answer children's queries.

(This recommendation has been incorporated into the 2007/08 guidance documents which have a dedicated school summary, which includes a question and answer section – available at www.teachernet.gov.uk/wholeschool/obesity/ncmp/guidance. This will also be supported by a training/information film available from www.dh.gov.uk/healthyliving in November 2007.)

- That opt-in consent for parents should be the norm and that it should be emphasised that good practice in schools and homes should be to talk with children and discuss their participation

- The meaning of consent should be explained to children more carefully

(This recommendation has been incorporated in the 2007/08 guidance – teachernet site which will host a new child information letter from November 2007.)

- That the school nursing service should consider more closely the day to day presentation of the exercise in terms of where it is carried out, how the school is prepared, how children are addressed, how privacy issues are dealt with etc

- That the measurement programme should be more integrated into wider health initiatives taking place in the school in order to ensure the emphasis is placed upon healthy lifestyles rather than body size which can cause distress to children

- That, though this is a surveillance exercise, the opportunity for health promotion should be used to give children heights and weights in a format that they will understand, along with comparator figures, possibly in the format of a booklet which incorporated advice about diet and exercise*.*

Conclusions

This was an informative pilot study, which has contributed to the ongoing evaluation of a measurement programme seen as very important by the public health community because of its size and potential to inform research and service provision. Whilst some of the recommendations arising from this study were addressed in the 2007/08 guidance, there remain several issues to address in future revisions. As this programme continues to roll into the third year of data collection, continued evaluation is required to ensure future success and maximise potential health impact.

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Appendices

Appendix 1: Audit exercise - Letter to schools

Dear [insert head teachers name]

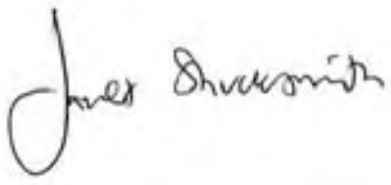
The University of Teesside, Durham University and the North East Public Health Observatory are carrying out an audit exercise to examine levels of participation amongst primary schools in the North East in relation to the Government's Body Mass Index (BMI) surveillance programme.

We would like to invite you to take part in a short telephone survey to ascertain whether your school took part in the 2006 surveillance programme and, if so, how it was carried out in your school.

We would like to conduct these telephone surveys between the 26th February and 9th March 2007. If you are not available when we call we will endeavour to contact you at another time. However, if you are unavailable for interviewing during this period please call or email Rebekah McNaughton on 01642 342755/ r.mcnaughton@tees.ac.uk to arrange an alternative time which is convenient for you.

We hope that you are able to take the time to speak to us on this important matter.

Yours faithfully



Janet Shucksmith
Professor of Public Health
Institute for Health Sciences and Social Care Research
University of Teesside

Appendix 2: Audit information sheet

Audit Information Sheet

This research has been triggered by the roll out of the 2006 national surveillance programme for measuring children's body mass index (BMI). The measurement programme links into wider public health initiatives which reflect concern about the current growth in rates of childhood obesity.

All Primary Care Trusts (PCTs) in England are required to measure the height and weight of children of reception age (4-5 yrs) and Year 6 children (10-11yrs). The data collected from this surveillance programme will be used by the Department of Health to inform local planning and targeting of resources and interventions and will enable tracking against Government targets.

The first year of the BMI Surveillance Programme in 2006 was not without its logistical problems, but it also raised critical questions for schools about their involvement in the exercise and about how they worked with parents and children to achieve what was required.

We would like to listen to your experiences of the BMI Surveillance Programme in 2006. We hope that this small pilot study will be able to help us make improvements to the way in which data is collected in the future.

Please note that neither individual schools nor respondents will be identified in any reporting of this work. Your answers are confidential and will only be seen by the research team. Data are subsequently stored in a secure archive.

Thank you for taking the time to read this information sheet. If you have any questions or concerns please contact: Rebekah McNaughton
☏ 01642 342755 🖱 R.McNaughton@tees.ac.uk

Appendix 3: Postal questionnaire

23 April 2007

Dear [insert Name]

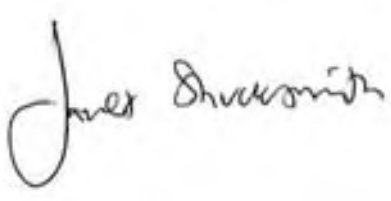
We recently sent you some information about an audit exercise we are undertaking with the University of Durham and the North East Public Health Observatory to examine the levels of participation amongst primary schools in the North East in the 2006 wave of the Government's Body Mass Index (BMI) surveillance programme.

One of our researchers has tried to contact you to take part in a short telephone survey. This has, however, proved difficult with your busy timetable. We would still like you to take part, as your opinions on this matter are very important. Therefore, please find enclosed with this letter an information sheet and questionnaire, giving you another opportunity to respond at a time that suits you. Your answers will be completely confidential. No school or individual will be identified in any subsequent reporting. Only the research team will see questionnaire returns.

If you have any questions about this research please call or email Rebekah McNaughton on 01642 342755/ R.McNaughton@tees.ac.uk, who will be happy to discuss the project with you.

We hope that you are able to take the time to complete the questionnaire as it is important that your school has a chance to comment on the measurement programme.

Yours faithfully



Janet Shucksmith
Professor of Public Health
Institute for Health Sciences and Social Care Research
University of Teesside

Please take the time to complete the questionnaire below. Should you need more space to fully answer a question please continue on a separate piece of paper (including the question number you are responding to). Remember, your answers are completely confidential.

School information

Name of School	
Name of person completing the form	
Position	

1.	**Could you give some basic demographic details about your school** (numbers, age range of students etc…)
2.	**Do you have 'Healthy Schools' status?**

School involvement in 2006 wave	
3.	**Were you invited to take part in last years Body Mass Index (BMI) Surveillance Programme?** (if *yes* how were you contacted? Phone/ letter/ visit)

4.	**Was it made clear to you what would be involved if you did take part in the programme?**
5.	**Did your school eventually take part in the 2006 roll out of the BMI Surveillance Programme?**

If your school did *not* take part in the 2006 roll out of the BMI Surveillance Programme please go to question 6.

If your school *did* take part please go to question 15.

Please complete the following sections if your school did not take part in the 2006 roll out of the BMI Surveillance:

Schools which did not take part: Reasons for not taking part in 2006	
6.	**If you did not take part in the BMI Surveillance Programme, was this a deliberate choice made by your school *or* did you not know about the programme?**
7.	**If it was a deliberate choice made by your school was this a principled stand *or* because of a practical problem?**
8.	**If you did not know about the programme do you think your school would have opted to take part had you been informed?**

Schools which did not take part: **Possible future participation**	
9.	**If your Primary Care Trust strongly advocated that your school should be involved in the future, would you be happy to take part?**
10.	**Would you envisage any specific difficulties which could hinder your schools participation?** (if so, how could they be overcome?)
11.	**In this event, would you envisage any problems obtaining consent from parents and children?**
12.	**Do you have school nursing staff** (either employed by your school or the PCT) **that could carry out the measurements of your children?**

13.	**Do you have any specific worries about children's obesity in your school?**

Please complete the following sections if your school did take part in the 2006 roll out of the BMI Surveillance:

Schools which did take part: Logistics of taking the measurements	
14.	**Who carried out the measurements in your school?**
15.	**Was any preparation for the surveillance programme given to children in lesson times?**
16.	**Did your school experience any logistical problems in carrying out the measurements?**
17.	**Was your school given support from anyone outside of your school?**
18.	**Were the staff involved in taking the measurements given any**

	special training?

Schools which did take part: Parents and their reactions	
19.	How did you obtain consent from parents?
20.	Did you find this method satisfactory?
21.	Did any parents stop their children from taking part?
22.	Did parents who refused to allow their children to participate offer reasons for their withdrawal?

Schools which did take part: Children and their reactions

23.	**How did you explain the programme to the children?** (e.g. assembly/ information sheet…)
24.	**Did the children give their own informed consent to being measured?**
25.	**What was your strategy for achieving this?**
26.	**Generally, what was the response to the measurement exercise from the children?** (Did they enjoy it?)

Schools which did take part: General views	
27.	**Overall, what are your views about the 2006 roll out of the measurement programme?**
28.	**What could be improved for the 2007 roll out?**

29.	**Will you be taking part in the 2007 roll out of the BMI Surveillance Programme?**

Thank you for taking the time to complete our questionnaire, please return it to us in the pre-paid envelope provided.

Appendix 4: Pilot evaluation – letter and information sheet to schools

[insert head teacher's name and address]

[Date]

Dear [insert head teachers name]

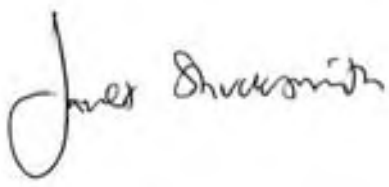
School involvement in BMI surveillance

The University of Teesside, Durham University and the North East Public Health Observatory would like to invite your school to take part in a pilot evaluation of the Body Mass Index (BMI) Surveillance Programme which took place in primary schools for the first time in 2006. In this small local study we are interested in finding out how schools are responding to the requirement to take part, as well as how parents and children themselves feel about the exercise.

Please take the time to read the enclosed information sheet which outlines the proposed research. We will contact you soon by telephone to discuss the research. If you have any questions please do not hesitate to contact Rebekah McNaughton 01642 342755 or R.McNaughton@tees.ac.uk. We would be happy to make a visit to your school to discuss the research.

We hope that you would like to take part in this research project and look forward to hearing from you.

Yours faithfully



Janet Shucksmith
Professor of Public Health
Institute for Health Sciences and Social Care Research
University of Teesside

School involvement in BMI surveillance
School Information

Background

This research has been triggered by the roll out of the 2006 national surveillance programme for measuring children's body mass index (BMI) which links into wider public health initiatives which reflect concern about the current growth in rates of childhood obesity.

All Primary Care Trusts (PCTs) in England are required to measure the height and weight of children of reception age (4-5 yrs) and Year 6 children (10-11yrs). The data collected from this surveillance programme will be used by the Department of Health to inform local planning and targeting of resources and interventions and enable tracking against Government targets.

The first year of the BMI Surveillance Programme in 2006 was not without its logistical problems, but it also raised critical questions for schools about their involvement in the exercise and about how they worked with parents and children to achieve what was required.

Objective

We would like to listen to your experiences of the BMI Surveillance Programme in 2006 and to hear the perspectives of your staff, school nurses, children and their parents as they prepare for and administer the 2007 round in early summer. We hope that this small pilot study will be able to help us make improvements to the way in which data is collected in the future.

Methods

We would like to observe preparation for and conduct of the 2007 round of measurements in April/May this year.

As part of this we would like to interview the head teacher, some of your teaching staff with responsibility for the year 6 age group, and any school nurses involved in the exercise. Middlesbrough Primary Care Trust is aware of our research and is happy for us to talk to their staff on school premises.

We would also like to interview parents in either pairs or groups. All interviews would be recorded with the permission of the respondents and subsequently transcribed. We would discuss with you how best to contact a sample of parents from your school. Selected parents will be sent or given an information pack (see appendix 1) which will include an information sheet, consent form and an invitation to take part in focus group discussions.

We would also like to conduct some focus group discussions with small groups of pupils. Pupils would be selected randomly from the classes involved in the surveillance and asked to nominate two or three friends to bring with them for a discussion. Activities and questions for use in the groups will be tailored to the age of the children and available for you and your staff to view beforehand. Parents of nominated children will also be given an information pack and asked to give consent for their child's participation. Children will also be briefed at the start of the discussion and asked to give their consent.

The data collected during the research process will be anonymous and confidential and will be stored securely at the University of Teesside. Only researchers working on the project will have access to it. No names or identifying features about you, your school or your children will be used in the write up of the study. Participation is voluntary, should you wish to withdraw your data from the study you can do so any time before [insert date], without giving reason.

Ethics

We have ethical approval from the University of Teesside's School of Health and Social Care ethics committee and also Research Management and Governance (RM&G) permission to interview NHS staff.

All those who agree to take part in the research will be briefed clearly as to the purpose of the study and will be asked to give their individual informed consent to take part, including children.

Feedback

A summary of the outcomes of our project will be available to the participating schools, parents and children. However, all information given to the project team is entirely confidential. Schools will not be identified in the final report and no individuals will be named or identified.

Research Staff

All staff that would come into your school has appropriate and up to date Criminal Records Bureau (CRB) check documentation.

Thank you for taking the time to read this information sheet. If you have any questions or concerns please contact: Rebekah McNaughton ☎ 01642 342755 🖱 r.mcnaughton@tees.ac.uk

Appendix 5: Letter and information sheet to parents

Date

Dear Parent/ Guardian

School involvement in BMI surveillance
Last year your child's school took part, along with most other primary schools in the country in the first Body Mass Index (BMI) Surveillance Programme. Young children have always been screened for height and weight on entry to school, but this programme has now been extended because of general concerns about growing obesity levels in children. Schools now also take part in a programme to screen year 6 children too.

Staff at the University of Teesside, Durham University and the North East Public Health Observatory are carrying out a small pilot study to see how we can build the views of teachers, parents and children into this exercise to improve the way the measurements are made. Your child's school has agreed to help us do this.

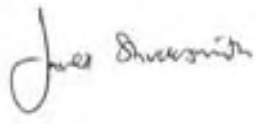
Your child has been selected at random and asked to take part in an informal discussion with some of his/her friends about the BMI measurements. We are writing to you now to ask if you would be happy for your child to take part in the discussion.

We would be grateful if you would take the time to read the information sheet enclosed and discuss this with your child.

We hope that you will be happy to let your child help us in this small piece of research and would be happy to answer any further questions you may have. Please direct any questions to Rebekah McNaughton 01642 342755 or R.McNaughton@tees.ac.uk.

If you consent to your child taking part in this study please sign the consent form enclosed and give it to your child to bring back to us at the school by [add date].

Yours faithfully



Janet Shucksmith
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Appendix 6: Parent project information sheet

School involvement in BMI surveillance
Parent Project Information Sheet

This research has been triggered by the roll out of the 2006 national surveillance programme for measuring children's body mass index (BMI) which links into wider public health initiatives which aim to prevent the current growth in rates of childhood obesity.

All Primary Care Trusts (PCTs) in England are required to measure the height and weight of children of reception age (4-5 yrs) and Year 6 children (10-11yrs). The data collected from this surveillance programme will be used by the Department of Health to inform local planning and targeting of resources and interventions and enable tracking against Government targets.

We would like to listen to what some of the children at your child's school think about the BMI Surveillance Programme as they prepare to take part in the 2007 roll out of it. We hope that this small study will be able to help us make improvements to the way in which data is collected in the future.

For this project children's name were chosen randomly from the class register. Each selected child was asked to invite a small number of other children to take part as well, so they will be interviewed in a friendship group.

If your child agrees to take part we have a number of activities for them to do. We will be holding discussions where they will be able to tell us what they think about the measuring programme. We also have some stories for them to consider and comment on, and there is also a 'feelings box' which they can put secret thoughts into. All of these will be explained to them by the researcher.

Taking part in our study is completely voluntary. Both you and your child can withdraw from the study at any time before [insert date] without having to give a reason.

The data collected during the research process will be anonymous and confidential and will be stored securely at the University of Teesside. Only researchers working on the project will have access to it. No names or identifying features about you/ your child will be used in the write up of the

study. A summary of the outcomes of our project will be available to both you and your child once the project is completed.

Thank you for taking the time to read this information sheet, if you have any questions please do not hesitate to contact Rebekah McNaughton on 01642 342755 or r.mcnaughton@tees.ac.uk.

Appendix 7: Consent form for parents

School involvement in BMI surveillance
Parental Consent Form
(Child Involvement)

Please take the time to read the statements below. If you are happy to take part in the study please initial each box, fill in the bottom of the sheet and return to the researcher.

I have read and understood the information sheets provided for the above study and have had the opportunity to ask questions about the study. ☐

I understand that my child's participation in this study is entirely voluntary. ☐

I understand that my child can withdraw at any time before [insert date] without giving any reason and without any of my rights or the rights of my child being affected. ☐

I understand that all information will be treated as confidential, and that my child will not be identified in any way. ☐

I understand that by signing and returning this form, I am giving my consent for my child to participate in this study. ☐

Name of child ……..

Parent/ Guardian Signature ……..

Date ……..

Appendix 8: Vignettes

Vignettes for use in child-centred discussion groups

Emily
Emily did not sleep very well last night because she was worrying about being weighed and measured at school today. She feels scared about being weighed and measured in front of the other children in her class in case they say things about the way her body looks. She is also unsure about what the school nurses will be doing and what will happen to her measurements after they have been taken.

Paul
Paul is being weighed and measured in school today with the other children in his class. He is interested in finding out how tall he is and how much he weighs. The school nurse tells him and then he asks his friends what their measurements are. Some of his friends laugh and joke with him about how much they weigh. Not all of his friends want to tell him and some of them did not know.

Sanjay
Sanjay's teacher talked to the class today about how the school nurse was going to come in next week and weigh and measure all of the children in the class. She asked if anyone had any questions. Sanjay asked about whether it would happen in front of the other children because he was worried about feeling watched. She told him it would be done behind a screen with just the school nurse there.

Catherine
Catherine took a letter home from school last term which said that all of the children in her class would soon be weighed and measured. Catherine talked about it with her Mum and they both decided that they didn't want Catherine to take part. When the school nurse came to do the measurement, Catherine felt left out because most of the other children were being weighed and measured.

Sarah
Sarah was weighed and measured in school yesterday. The school nurse was really nice and made Sarah feel comfortable by explaining what she was doing. She also told her not to worry about how tall she was or how much she weighed and that there was nothing wrong with her.

Appendix 9: Interview Guides

Head Teacher	
2006	**2007**
• How were you invited to take part? • Was there clear guidance provided by the PCT? • Who decided that your school should take part? • Opinions about appropriateness of school as site for measurements? • Any logistical problems? • Extra staff needed? • Any feedback from staff/ parents/ children? • What was overall view?	• How were you invited to take part? • Was there clear guidance provided by the PCT? • Any logistical problems? • Extra staff needed? • Any feedback from staff/ parents/ children? • Lessons learnt from last year? • Has this year posed any new difficulties?
Teaching Staff	
2006	**2007**
• How were you informed about the plans for BMI Surveillance? • Given any specific training? • Support from outside of the school? • Was there any preparation made in lessons to inform children? • Did you have any contact with parents to inform them? • Were you aware of any problems experienced by children as a consequence of measurement programme? • Any logistical issues?	• How were you informed about the plans for BMI Surveillance? • Given any specific training? • Support from outside of the school? • Was there any preparation made in lessons to inform children? • Did you have any contact with parents to inform them? • Were you aware of any problems experienced by children as a consequence of measurement programme? • Any logistical issues?
Nursing Staff	
2006	**2007**
• How were you informed that the measurements would be taking place in your school(s) • Were you given any specific training? • Did you go into lessons to speak with the children? • How did you explain to parents? • What was your strategy for	• How were you informed that the measurements would be taking place in your school(s) • Were you given any specific training? • Did you go into lessons to speak with the children? • How did you explain to parents? • What was your strategy for

gaining consent from parents/ children? • Was this effective? • Did any refuse? • Did they give reason? • Who carried out the measurements? • Where were the measurements carried out? (in hall behind screen/ private room etc…) • When were the measurements carried out? (time of day) • How were the measurements carried out? • What was the response from the children? • What happened to the data you collected? • Overall view?	gaining consent from parents/ children? • Was this effective? • Did any refuse? • Did they give reason? • Who carried out the measurements? • Where were the measurements carried out? (in hall behind screen/ private room etc…) • When were the measurements carried out? (time of day) • How were the measurements carried out? • What was the response from the children?
Parents	
2006	**2007**
	• How were you informed about the BMI measurements? (info sheets etc…) • What are your views of measuring BMI in children? • How were you asked to give consent? • Did you discuss it with… school/ family/ child/ friends? • Who made the final decision to (not) take part? (parent/ child) • Were you worried about the outcome of the measurements? • What were your child's views after measurement?
Children	
	2007
	• Ask about general logistics (????) • Work through vignettes • Introduce 'feelings' box

Contact details

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